

ABSTRACT

A laser diode package includes a heat sink, a laser diode, and an electrically nonconductive (i.e. insulative) substrate. The laser diode has an emitting surface and a reflective surface opposing the emitting surface. The laser diode further has first and second side surfaces between the emitting and reflective surfaces. The heat sink has an upper surface and a lower surface. The first side surface of the laser diode is attached to the heat sink adjacent to the upper surface. The substrate is attached to the lower surface of the heat sink. The heat sink is made of heat conducting metal such as copper and the substrate is preferably made from gallium arsenide. The substrate is soldered to the heat sink as is the laser diode bar. Due to the presence of the substrate at the lower end of the heat sink, each individual laser diode package has its own electrical isolation. Several packages can be easily attached together to form a laser diode array.